1072-53-3, Ethylene sulfate 1120-71-4, 1,3-Propanesultone
1717-84-6 2049-95-8, tert-
Amylbenzene 16156-58-4, 2-Propynyl methanesulfonate
32042-39-0 36677-73-3 61764-71-4 71573-77-8,
Di(2-propynyl) oxalate 79493-91-7, Dipropargyl
carbonate 131166-79-5 197244-15-8 347396-84-3 406725-07-3
833427-83-1
RL: MOA (Modifier or additive use); USES (Uses)
(electrolyte solns. containing vinyl carbonate derivs.
and alkyne compds. for secondary lithium
batteries)
REFERENCE COUNT: 8 THERE ARE 8 CITED REFERENCES AVAILABLE
FOR THIS RECORD. ALL CITATIONS AVAILABLE
IN THE RE FORMAT

L82 ANSWER 6 OF 6 HCAPLUS COPYRIGHT 2010 ACS on STN
ACCESSION NUMBER: 2004:159983 HCAPLUS Full-text
DOCUMENT NUMBER: 140:202414
TITLE: Secondary lithium
battery, nonaqueous
electrolyte, and method for ensuring
battery safety
INVENTOR(S): Abe, Hiroshi; Miyoshi, Kazuhiro; Kuwata,
Takaaki; Matsumori, Yasuo
PATENT ASSIGNEE(S): Ube Industries, Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 15 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2004063367	A	20040226	JP 2002-222509	2002 0731
JP 4374833	B2	20091202		
PRIORITY APPLN. INFO.:			JP 2002-222509	2002 0731

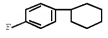
ED Entered STN: 27 Feb 2004
AB The battery uses a Ni or Co containing Li multiple oxide, a Li (alloy) or Li intercalating anode, and a nonaq. electrolyte solution; where the electrolyte solution contains an organic compound which decomps. to deposit a coating layer on the active Li surface, during overcharge of the battery, to ensure the battery safety. Preferably, the compound has an redox. potential 4.6.apprx.5.2 V vs. Li, and is a ketone selected from menthone, isomenthone, camphor, nopinone, and fenchone and may be mixed with a cyclohexylbenzene derivative The electrolyte solution contains the compound
IT 96-49-1, Ethylene carbonate
105-58-8, Diethyl carbonate
872-36-6, Vinylene carbonate
RL: DEV (Device component use); USES (Uses)
(electrolyte solns. containing organic compound additives for
secondary lithium battery safety)
RN 96-49-1 HCAPLUS
CN 1,3-Dioxolan-2-one (CA INDEX NAME)

RN 105-58-8 HCAPLUS
CN Carbonic acid, diethyl ester (CA INDEX NAME)

RN 872-36-6 HCAPLUS
CN 1,3-Dioxol-2-one (CA INDEX NAME)

IT 98-06-6, tert-Butylbenzene
1717-84-6 2049-95-8, tert-Pentylbenzene
RL: MOA (Modifier or additive use); USES (Uses)
(organic compound additives in electrolyte solns. for secondary lithium battery safety)
RN 98-06-6 HCAPLUS
CN Benzene, (1,1-dimethylethyl)- (CA INDEX NAME)

RN 1717-84-6 HCAPLUS
CN Benzene, 1-cyclohexyl-4-fluoro- (CA INDEX NAME)



RN 2049-95-8 HCAPLUS
CN Benzene, (1,1-dimethylpropyl)- (CA INDEX NAME)

IC ICM H01M010-40
ICS H01M004-02; H01M004-40; H01M004-58
CC 52-2 (Electrochemical, Radiational, and Thermal Energy Technology)
ST secondary lithium battery

electrolyte safety additive ketone
cyclohexylbenzene

IT Battery electrolytes
Safety
(electrolyte solns. containing organic compound additives for secondary lithium battery safety)

IT Secondary batteries
(lithium; electrolyte solns. containing organic compound additives for secondary lithium battery safety)

IT 96-49-1, Ethylene carbonate
105-58-8, Diethyl carbonate
872-36-6, Vinylene carbonate
21324-40-3, Lithium hexafluorophosphate
RL: DEV (Device component use); USES (Uses)
(electrolyte solns. containing organic compound additives for secondary lithium battery safety)

IT 76-22-2, Camphor 89-80-5, Menthone 98-06-6, tert-Butylbenzene 491-07-6, Isomenthone 827-52-1, Cyclohexylbenzene 1787-84-6 2049-95-8, tert-Pentylbenzene 4695-62-9, (+)-Fenchone 24903-95-5, Nopinone 444603-90-1
RL: MOA (Modifier or additive use); USES (Uses)
(organic compound additives in electrolyte solns. for secondary lithium battery safety)